For Internal Use Only:	
RFC Tracking #:	
Submission Date:	
ECCB Presentation Date:	*ECCB Milestone Review Date:*
ECCB Action:	☐ *Recommended (with or without Coordinating Instructions)*
	☐ *Deferred with Coordinating Instructions*
	☐ *Forwarded to CPB with Comments*
CPB Funding Decision:	☐ *Recommended* ☐ *Deferred with Comments*

To be completed by Requestor:

Project Overview

Project Name: MCMIS Update of OOSO activity to SAFER in Near Real-Time	
Submitted By: Rosemarie Kelly	*(Federal Staff only)*
(Program Office) Business Sponsor: Tom Lawler	*(Federal Staff only)*

Short Description: The FMCSA PRISM program utilizes the SAFER database to provide its users with MCMIS carrier census data necessary to comply with several PRISM program requirements. States maintain a local version of this data by processing a batch file after SAFER has been updated with a daily MCMIS activity transaction file. Due to timing delays inherent with these batch file updates, PRISM implementation procedures require that users verify the out of service status maintained in MCMIS if during processing the carrier disputes the value of the data maintained locally. Recently, PRISM has suggested that States utilize existing SAFER Web Services as an alternative to using their local systems to access the value of certain carrier census data. However, this approach only addresses the timing and logistical problems associated with getting the daily transaction batch files from SAFER to the State users. When necessary, on-line web browser access to MCMIS to validate data values is still required due to the timing differences between what is in SAFER and the actual value maintained in MCMIS.

To help resolve this problem, PRISM requests that a trigger be built in MCMIS to monitor the OOS_Carrier table that is updated whenever an out of service order is issued or rescinded. The only function of this trigger would be to notify SAFER in real time when a carrier has a change made to its Out of Service Status. The notification would be done by initiating a request to the Oracle Database Management System job queue that would in turn pass that USDOT Number to SAFER using an existing database link. A trigger in SAFER would then retrieve the carrier's MCSIP Step from MCMIS using an indexed key search through that same database link. Together these enhancements should go unnoticed by end users but they would allow subsequent inquiries using a new SAFER web services transaction to return the latest out of service status of the carrier in near real-time mode. The PRISM team will work with SAFER to specify the contents of this new transaction separately.

SAFER technical support staff has reviewed this request and preliminary findings indicate that the additional development effort and impact on existing systems would be very small. Historical statistics on the frequency of carrier out of service status changes have been compiled using audit trail data maintained internally within MCMIS. A review of the findings shows that during a recent 90 day period starting February 16, 2006, a daily average of 21.3 inserts or changes were made to the OOS_Carrier table in MCMIS of which an average of 13.3 occurred between the hours of 4-7 AM. These statistics and the proposed design of the mechanism that will be used to communicate change information to SAFER have been attached as supporting documentation. If approved, the SAFER support staff is prepared to perform all the development and unit testing of any changes necessary to MCMIS. PRISM

Technical Support is prepared to develop and execute an acceptance test of the changes. All that is being requested of the MCMIS development staff in support of this initiative is to assist in the preparation of an acceptance test environment and ultimate acceptance of the enhancement.

Priority (check highest one that applies):

☐ *1 – Required by Law/Regulation/Policy*
(Anticipated Effective Date: (if known))
☐ *2 – Essential for Functionality/Operability/DQ*
☒ *3 – Improves Functionality/Operability/DQ*
☐ *4 – Optional*

Project Details (Full Description)

Project Description (Describe the change/enhancement in detail and the impact on the organization):

To support this request, the new trigger in MCMIS would notify SAFER when a change is made to the out of service status of a carrier by submitting a job into an asynchronous queue maintained within Oracle. The job will contain information that would be inserted into a new table within SAFER indicating that a change had been made in MCMIS since the last daily MCMIS to SAFER update routine. By utilizing this method of notification, there would be no overhead in MCMIS to determine if that message was received and processed by SAFER thus minimizing the impact on the out of service maintenance process.

To minimize the impact on SAFER, the carrier table there would not be updated as a result of the change in MCMIS. Instead, the job submitted by the MCMIS trigger would load the USDOT Number into a table created in SAFER that contains the USDOT number, MCSIP Step and a timestamp field. A trigger in SAFER would then retrieve the carrier's MCSIP Step from MCMIS and update the current timestamp. This information would be available to a new SAFER Web Services transaction developed for use by PRISM users at a later date. That transaction would check to see if a change had been made to the out of service status of a carrier since the last daily MCMIS update to SAFER and if so, it would use the resulting MCSIP Step value when returning carrier census data to the user. If a change had not been made, all field values would come from the SAFER carrier table.

Problem/Issue (Why we need to do this):

Out of all the requirements that States must fulfill to be certified by the PRISM program, one in particular stands out that would benefit the most from having access to the latest MCSIP Step value maintained in MCMIS. That is the denial of IRP license credentials if an Out of Service Order from FMCSA is in effect. Due to the serious nature of enforcing this requirement, States need access to the authoritative source of the data maintained in MCMIS to be sure of the status.

At this time, States may compromise the implementation of this requirement by relying solely on data maintained locally via batch updates from SAFER. Either that or they would be forced to stop in the midst of validation editing and manually log into MCMIS using a web browser to verify if contested data maintained locally accurately represents the data maintained in MCMIS. By providing State users with near real-time access to the MCSIP Step maintained in MCMIS via a program-to-program interface such as a Web Service inquiry, the full capabilities and ease of use of implementing the PRISM program could be realized.

Proposed Solution (How this addresses the problem/issue):

Access to the current status of Federal Out of Service Orders placed or rescinded against a carrier is needed during vehicle IRP credential processing. Due to the volatile nature of some Out of Service Orders, especially failure to pay, it is often necessary for State users to verify a carrier's OOSO status in MCMIS prior to issuing or denying IRP credentials. If State IRP maintenance programs had programmatic access to the latest MCSIP Step maintained in MCMIS, as is being requested, it would greatly facilitate credentials processing according the rules set out by the PRISM program.

Alternative Analysis (Provide the reason for selecting this investment option and at least one viable alternative):

The fundamental capability being requested is the ability of PRISM State users to have programmatic access to the latest information maintained in MCMIS to maximize the benefit of participating in the PRISM program. The approach put forward in this change request is a compromise that seeks to minimize the system overhead and development team effort for both MCMIS and SAFER. An alternative approach to obtaining real time access to data maintained in MCMIS would be for MCMIS to develop similar Web Service capabilities as those currently available in production from SAFER. Although that approach, if available, would eliminate the need for SAFER to develop a special Web Services transaction specifically for use by PRISM State users, it is thought that the additional processing overhead, development effort and security concerns related to development of Web Services data inquiry capabilities within MCMIS would prohibit the development of that functionality within MCMIS at this time.

Further more, the proposed implementation put forward in this change request does not include the actual update of the MCSIP Step field in the carrier table within SAFER after a change has been made in MCMIS. Although other FMCSA Safety data inquiry systems such as NLETS would benefit from having these fields updated in near real-time mode within SAFER, doing so would be a difficult and lengthy undertaking to develop and test to insure that the impact of audit trail and subscription processing currently available in SAFER is not adversely affected by the actual updates of the carrier table throughout the day. In fact, by providing PRISM State users with the latest out of service status maintained in MCMIS along with other fields values coming from SAFER, this solution mirrors the way Query Central currently returns data as a result of a USDOT Number inquiry. That is, the Out of Service status returned is from the live/authoritative source of that data and the remaining data comes from SAFER.

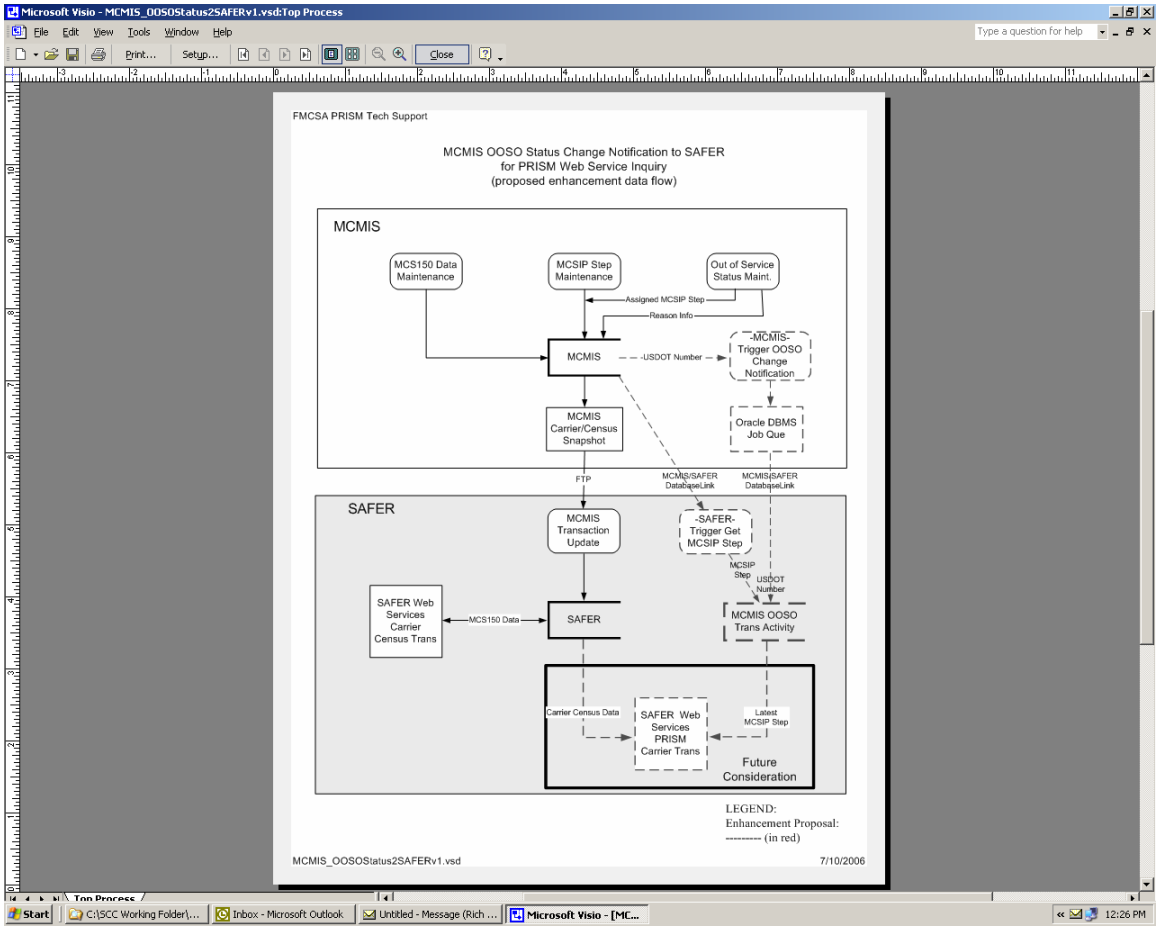
Risk Analysis/Mitigation (Conditions that might impact the timely and successful completion of this project and a plan to address any risks):

To ease the development time and burden on the MCMIS team, SAFER has agreed to perform all the analysis, development and unit testing required to perform the enhancements proposed to the MCMIS system. Benchmark testing along with the development and implementation of acceptance testing of the additional functionality within MCMIS would be performed by PRISM Technical Support staff in conjunction with SAFER and MCMIS program staff to insure actual and expected minimal impact on both systems. Any enhancements developed for both MCMIS and SAFER will be compartmentalized in nature so if any unforeseen problems arise, those capabilities could be removed without any impact on the existing production systems.

Project Schedule (assuming immediate action by ECCB)

Start Date:	July 15, 2006
End Date:	August, 2006

Key Milestones/deliverables	
FY06 Q3 Release:	Analysis, development, testing and implementation of the proposed enhancements to both MCMIS and SAFER.



Impact Statements

To be completed by applicable SME:

Data Quality

Reviewer:	Date:	Recommendation: ☐ Recommended ☐ Address Comments
Analysis:		

Enterprise Architecture (EA)

Reviewer:	Date:	Recommendation: ☐ Recommended ☐ Address Comments
Analysis:		

EVM/Budget

Reviewer:	Date:	Recommendation: ☐ Recommended ☐ Address Comments
Analysis:		

Field Offices

Reviewer:	Date:	Recommendation: ☐ Recommended ☐ Address Comments
Analysis:		

Infrastructure/Network

Reviewer:	Date:	Recommendation: ☐ Recommended ☐ Address Comments
Analysis:		

Privacy/508 Compliance

Reviewer:	Date:	Recommendation: ☐ Recommended ☐ Address Comments
Analysis:		

Security

Reviewer:	Date:	Recommendation: ☐ Recommended ☐ Address Comments
Analysis:		